Industry Snapshots

- The Energy Industry incorporates a broad range of sectors, including: Petroleum and Natural Gas extraction, refining, and distribution; Electric Power Generation, distribution and Mining.
- Public utilities employed about 600,000 workers in 2002. Electric power generation, transmission, and distribution provided almost three in four jobs (436,000), while natural gas distribution (116,000) and other systems (48,000) provided the rest of the jobs (U.S Bureau of Labor Statistics)
- The Gross Domestic Product (GDP) for the energy industry, including electric and gas utilities, nuclear power generation, mining (including coal and minerals), and oil and gas extraction in 2003 was $352 billion, a 3.2% share of the national total. (U.S. Bureau of Economic Analysis)

High Growth INDUSTRY PROFILE

Workforce Issues

Preparing for the Demographic

- Improving the energy industry's public image
- Increasing available labor pools
- Maintaining a stable labor supply

Education and Training Programs

- Developing new training programs
- Improving existing programs
- Expanding successful models

Skill Development

- Transferring knowledge from the aging workforce
- Preparing entry-level workers
- Developing competency models and career ladders

Skill Sets

(Source: U.S. Bureau of Labor Statistics)

- Workers can enter the Oil and Gas Extraction industry with a variety of educational backgrounds. The most common entry-level field jobs usually require little or no previous training or experience. Other entry-level positions, such as engineering technician, usually require at least a 2-year Associate degree in engineering technology. Professional jobs, such as geologist, geophysicist, or petroleum engineer, require at least a bachelor's degree, but many companies prefer to hire candidates with a master's degree, and may require a Ph.D. for those involved in petroleum research.
- Employers seek high school graduates for entry-level power plant operator, distributor, and dispatcher positions. Candidates with strong mathematics and science skills are preferred. College-level courses or prior experience in a mechanical or technical job may be helpful. With computers now used to keep records, generate reports, and track maintenance, employers are increasingly requiring computer proficiency.
- While most mining jobs can be entered directly from high school, the increasing sophistication of equipment and machinery requires a higher level of technical skill.

ETA in Action

Since 2003, U.S. Secretary of Labor, Elaine L. Chao, has announced ten investments totaling nearly $27 million to address the workforce needs of the energy industry.

DOL has sought to understand and implement industry identified strategies to confront critical workforce shortages. It has listened to employers, industry association representatives, and others associated with the energy industry regarding some of their efforts to identify challenges and implement effective workforce strategies. DOL's Employment and Training Administration is supporting comprehensive business, education, and workforce development partnerships that have developed innovative approaches that address the workforce needs of business while also effectively helping workers find good jobs with good wages and promising career pathways in the energy industry.

DOL's Employment and Training Administration is supporting comprehensive business, education, and workforce development partnerships that have developed innovative approaches to address the workforce needs of business while effectively helping workers find good jobs with good wages and promising career pathways in the energy industry. This set of workforce solutions is based on the energy industry's priorities that address issues such as:

- developing curricula for increasingly technical skill sets;
- enhancing educational institutions' capacity to train to industry-defined standards;
- developing updated work-based learning strategies;
- helping alternative labor pools gain the skills they need for high-paying jobs in the energy industry;
- expanding the pipeline of youth; and
- developing updated work-based learning strategies.

Investments

Total Industry Investment is $26,994,498
Total Leveraged Resources are $20,187,648

San Juan College
San Juan College Regional Energy Training Center
Grant amount: $2,113,127; Leveraged amount: $2,500,000

High Plains Technology Center
Oil and Gas Training Center
Grant amount: $1,546,463; Leveraged amount: $528,623

State of Alaska Department of Labor and Workforce Development
Alaska's High Growth Job Training Initiative for Energy
Grant amount: $7,000,000; Leveraged amount: $1,100,000

Oklahoma Department of Career and Technical Education
Strengthening the U.S. Upstream Oil and Gas Industry
Grant amount: $2,363,539; Leveraged amount: $565,593

College of Eastern Utah
Energy Training Center
Grant amount: $2,737,804; Leveraged amount: $3,197,376

West Kentucky Workforce Investment Board
Kentucky's Demand-Driven Response to the Coal Industry Workforce Crisis
Grant amount: $3,025,260; Leveraged amount: $7,100,000

West Virginia University
Mine Training and Placement Center
Grant amount: $3,000,000; Leveraged amount: $544,333

Penn State University
Mine Training and Placement Center
Grant amount: $502,310; Leveraged amount: $572,670

University of Missouri-Columbia
Center of Excellence for Radiation Protection Technology
Grant amount: $2,305,995; Leveraged amount: $1,172,053

Wyoming Department of Workforce Services
Rocky Mountain Oil and Gas Training Center
Grant amount: $2,400,000; Leveraged amount: $2,907,000

Resources

For additional background information about the industry and details on the grants, information about employment and training opportunities, and workforce development tools for employers, educators, and workforce professionals please refer to the following: **www.doleta.gov/BRG**, **www.careervoyages.gov**, **www.careeronestop.org**, and **www.workforce3one.org**.